Course Plan of (Basic Pharmacology)

II. Course Description:

Pharmacology is designed to prepare the students integrates comprehensive knowledge of pharmacology to formulate a treatment plan intended to mitigate emergencies and improve the overall health of the patient. This course will give an overview of pharmacology, including historical trends in pharmacology, general properties of drugs, mechanisms of drug action, drug profiles and special considerations in drug therapy, drugs that affect cardiovascular, nervous, blood and respiratory system.

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	
1	**Historical Trends in Pharmacology**	▪ History of drug o Ancient and modern health care ▪ **Drug Names** o Chemical name o Generic name o Trade name o Official name ▪ Sources of Drug information ▪ Drug Standards and Legislation ▪ Drug Regulatory Agencies	1	2	
2	**General properties of Drugs**	▪ Pharmacologic Terminology ▪ Pharmaceutical Phase ▪ Pharmacokinetic Phase o Drug Absorption o Routes of Drug Administration o Excretion	1	2	

		○ Biotransformation ○ Excretion ○ Factors That Influence the Action of Drugs ▪ Pharmacodynamic Phase ○ Drug–Receptor Interaction ○ Drug-Response Assessment ○ Biologic Half-Life ○ Therapeutic Index			
3	**Mechanisms of drug action and considerations in drug therapy**	**General Properties of Drugs** ○ Introduction ○ Pharmaceutical Phase ○ Pharmacokinetic Phase ○ Routes of Drug Administration ○ Parenteral Route (by injection) ○ Pulmonary Route ○ Topical Route ○ Drug Distribution ○ Pharmaco-dynamic Phase **Drug Interactions** ○ Variables that Influence Drug Interaction ○ Drug-Drug Interactions ○ Other Factors that can Influence Drug Interactions **Drug Storage** ○ Certain Precepts Should Guide the Manner in which Drugs are Secured, Stored, Distributed, and Accounted For ○ Factors that Affect Drug Potency ○ Applies also to Diluents ○ Security of Controlled Medications	1	2	

4	**Drugs That Affect the Nervous System**	▪ Autonomic Division of Peripheral Nervous System ▪ Neurochemical Transmission ▪ Transmission of Nerve Impulses in the Autonomic Nervous System ▪ Drugs That Affect the Autonomic Nervous System o Classifications ▪ Narcotic Analgesics and Antagonists ▪ Non-narcotic Analgesics ▪ Anesthetics ▪ Antianxiety and Sedative-Hypnotic Agents and Alcohol o Classifications ▪ Alcohol Intake and Behavioral Effects ▪ Anticonvulsants ▪ CNS Stimulants o Anorexiants o Amphetamines ▪ Psychotherapeutic Drugs o CNS and Emotions o Antipsychotic Agents o Antidepressants ▪ Drugs for Specific CNS–Neuromuscular Dysfunction o Parkinson Disease o Huntington Disease ▪ Drugs With Central Anticholinergic Activity ▪ Drugs That Affect Dopamine in the Brain o Monoamine Oxidase Inhibitors ▪ Skeletal Muscle Relaxants o Central-Acting Muscle Relaxants o Direct-Acting Muscle Relaxants o Neuromuscular Blockers	3	6	
5	**Midterm exam**	**Midterm exam**	1	2	

6	**Drug Profiles**	**Drug Profiles and Special Considerations in Drug Therapy** ○ The Paramedic should be Familiar with the Drug Profiles of any Drug that He or She Administers ○ Components of a Drug Profile ○ Special Considerations in Drug Therapy ▪ **Various Forms of Drug Preparations** ▪ **Special Considerations in Drug Therapy** ○ Pregnant Patients ○ Pediatric Patients ○ Older Adult Patients	2	4	
7	**Drugs That Affect the Cardiovascular System**	▪ Review of Anatomy and Physiology ▪ Cardiac Glycosides ▪ Antidysrhythmics ○ Classifications ▪ Antihypertensives ○ Classifications	2	4	
8	**Drugs That Affect the Blood**	▪ Anticoagulants ▪ Antihemophilic Agents ▪ Hemostatic Agents ▪ Hemorrhagic Agents ▪ Antifibrinolytic Agents ▪ Blood and Blood Components ▪ Antihyperlipidemic Drugs	2	4	
9	**Drugs That Affect the Respiratory System**	▪ Review of Anatomy and Physiology ▪ **Bronchodilators** ○ Sympathomimetic Drugs ○ Anticholinergic Bronchodilator ○ Xanthine Derivatives ○ Other Respiratory Drugs ▪ **Mucokinetic Drugs** ▪ **Oxygen and Other Respiratory Agents** ○ Direct Respiratory	2	4	

		Stimulants o Reflex Respiratory Stimulants o Respiratory Depressants o Cough Suppressants o Antihistamines o Serotonin o Selective Serotonin Reuptake Inhibitors o Antiserotonins			
	Final term exam	**Final term exam**	1	2	
Number of Weeks /and Units Per Semester			**16**	**32**	